REMARKS

Claims 1-10 are pending and stand rejected. Claims 9 and 10 have been amended. No new matter has been added. Claims 7 and 8 have been cancelled.

Claims 7 and 8 are rejected under 35 USC §101 as they are directed to non-statutory subject matter.

Applicant respectfully disagrees with, and explicitly traverses, the examiner's reason for rejecting the claims. However, in order to advance the prosecution of this application, applicant has elected to cancel claims 7 and 8, without prejudice and reserves the right to re-prosecute the claims at a later time.

Having cancelled claims 7 and 8, applicant submits that the reason for the examiner's rejection of the claims is no longer valid. Applicant respectfully requests withdrawal of the rejection.

Claims 1, 2, 4, 5, and 7-10 are rejected under 35 USC §102(b) as being anticipated by Tanaka (USP No. 5,144,426). It is the examiner's position that Tanaka discloses each and every element recited in the claims.

With regard to claim 1, which is typical of the other independent claims, this claim recites:

> 1. A method of compressing a video signal, the method comprising:
>
> predictively encoding (10,11) frames (X) of said video signal with reference to a prediction frame (X_p),
>
> calculating (20) a quantization parameter (q) for each encoded frame,
>
> quantizing (12) the encoded frames in accordance with said quantization parameter,

characterized in that said step of calculating the quantization parameter includes calculating a first quantization parameter (q) representing a first quality or bit rate for quantizing selected first frames (P) of said predictively encoded frames, and a second quantization parameter (F.q) representing a second quality or bit rate that is lower than said first quality or bit rate for quantizing selected second frames (P') of the video signal, the method further including:

decompressing (15-18) the compressed second frames to constitute the prediction frame (X_p) for predictively encoding the first frames.

Tanaka, as read by applicant, describes a motion compensated prediction interframe coding system that determines characteristics a of picture that is divided into a group of blocks with regard to the fineness of the picture pattern or texture. The blocks are quantized by using a quantization step size and the step size is changed to a smaller one when the picture pattern or texture is finer than patterns of other blocks. (See, for example, col. 25, lines 25-32, which state in part, "the second quantization step size 320 used for quantizing a block to be coded by using the interframe coding method is made to become smaller than the first quantization step size..."). The specific method for determining the reduced second quantization step is shown, for example, in col. 25, lines 16-24. In the example shown, Q_b represents the first quantization step size and the second quantization step size is either 0.75, 0.5 or 0.25 Q_b based on the fineness of the picture texture. The finer the texture, the smaller the quantization step size. Thus, the smaller quantization step represents a higher quality or bit rate over the initial quantization step size from which it is calculated because a higher bit rate is needed to transmit the finer picture texture.

Tanaka fails to disclose a second quantization step size that is determined from the first quantization step size and the second quantization step size represents a second quality or bit rate that is lower than the bit rate associated with the first quantization step. Accordingly, Tanaka can not be said to anticipate the present invention because Tanaka fails to disclose each and every element recited in the claims.

Applicant would further note there appears to be some misunderstanding with regard to the quantization step size and to the corresponding bit-rate. As stated in the instant application, increasing the quantization parameter q for selected frames degrades the image of the frames but reduces their bit cost. (see page 3, lines 23-25). Hence, increasing the quantization step size degrades the picture image and decreases bit rate as fewer bits are required to transmit the degraded image. The examiner in rejecting the claims refers to the Tanaka reference in that "Qstep is the second quality for quantization of selected second frames and that, on lines 43-48, the second quality Qstep is lower than the first quality Qb because the first quality Qb is multiplied by a factor 1/4, 1/2, or 3/4, thus making the second quality Qstep smaller or lower than the first quality Qb. So, Tanaka does disclose 'a second quantization parameter representing a second quality or bit rate that is lower than said first quality bit rate.'" (see pages 2-3 of the instant Office Action). However, the Qstep is not a measure of the quality or bit rate but of the quantization step size. (See for example, col. 25, lines 13-15, which states,"let Qb denote the first quantization step size and Qstep the second quantization step size.). Hence, a lower second quantization parameter (i.e., step size) represents a second quality or bit rate that is higher than the first quality or bit rate, not a lower one as the examiner understands. Thus, Tanaka does not teach the "second quantization parameter (F.q)

representing a second quality or bit rate that is lower than said first quality or bit rate," as is recited in the claim.

The examiner further states that "in col. 5, line 64 to col. 6, line 14, [of Tanaka] the purpose of Tanaka's invention is to calculate and use a second quantization step size to further improve the picture quality, not degrade picture quality." (see page 3 of the instant Office Action). However, this is a feature that is contrary to the purpose of the present invention. As disclosed on page 3, lines 24-26 of the instant application "[t]he arrangement in accordance with the invention increases the quantization parameter q for selected frames, thereby degrading the image quality of frames." Hence, while Tanaka seeks to determine quantization step size to improve picture quality, the instant application performs the reverse operation.

Having shown that Tanaka fails to disclose each and every element recited in the claims, and because there appears to be a misunderstanding with regard to quantization step size and bit rate, applicant submits that the examiner's reason for rejecting claim 1 has been overcome and can no longer be sustained. Applicant respectfully requests reconsideration, withdrawal of the rejection, and allowance of the claims.

With regard to independent claims 4, 9 and 10, these claims have been rejected for the same reason used in rejecting claim 1. Claims 4, 9, and 10 contain subject matter similar to that recited in claim 1. Hence, the remarks made with regard to the rejection of claim 1 are also applicable in overcoming the rejection of claims 4, 9 and 10. For the remarks made with regard to claim 1, which are repeated in response to the rejection of claims 4, 9 and 10, applicant submits that the examiner's reason for rejecting

the claims has been overcome and can no longer be sustained. Applicant respectfully

requests reconsideration, withdrawal of the rejection and allowance of the claims.

With regard to claims 2 and 5, these claims ultimately depend from claims 1

and 4, which have been shown to be patently distinguishable and allowable over the cited

reference. Accordingly, these claims are also allowable by virtue of their dependency
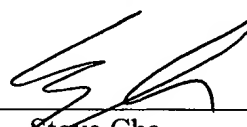
upon an allowable base claim.

Applicant wishes to thank the examiner for the indication of allowable

subject matter in claims 3 and 6. However, for the remarks made herein applicant

believes that all of the claims are allowable and has elected not to amend claims 3 and 6

as suggested by the examiner. However, applicant reserves the right to amend these

claims at a latter time.

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

Applicant further submits herewith a Supplemental Information Disclosure Statement to bring to the examiner's attention and consideration USP No. 5,638,126, issued June 10, 1997 to Lin.

Respectfully submitted,

Russell Gross
Registration No. 40,007

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By: Steve Cha
Attorney for Applicant
Registration No. 44,069

Mail all correspondence to:
Russell Gross, Registration No. 40,007
US PHILIPS CORPORATION
P.O. Box 3001
Briarcliff Manor, NY 10510-8001
Phone: (914) 333-9608
Fax: (914) 332-0615

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Steve Cha, Reg. No. 44,069
(Name of Registered Rep.)

(Signature and Date)